

Confirmation No. 9022

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellant:	VAN HOUDT <i>et al.</i>	Examiner:	Ghebretinsae, T.
Serial No.:	10/538,576	Group Art Unit:	2611
Filed:	June 15, 2005	Docket No.:	NL021302US1 (NXPS.520PA)
Title:	FRAME SYNCHRONIZING DEVICE AND METHOD		

REPLY BRIEF

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P.O. Box 1450
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Dear Sir:

This is a Reply Brief submitted pursuant to 37 C.F.R. § 41.41(a)(1) for the above-referenced patent application. This Reply Brief is submitted in response to the Examiner's Answer dated January 20, 2010.

Authorization is given to charge/credit **Deposit Account 50-4019 (NL021302US1)** all required fees/overages to enter this paper.

I. Status of Claims

Claims 1-15 stand rejected and are presented for appeal.

II. Grounds of Rejection

The grounds of rejection to be reviewed on appeal are as follows:

- A. Claims 1-14 stand rejected under 35 U.S.C. §102(b) over Buckland (U.S. Patent No. 4,744,081).
- B. Claim 15 stands rejected under 35 U.S.C. §103(a) over Buckland (U.S. Patent No. 4,744,081) in view of Giorgetta (U.S. Patent No. 7,035,292).

III. Appellant's Reply Argument

Appellant's Reply Brief does not replace the Appeal Brief and is intended to supplement the Appeal Brief. In addition to the arguments presented in the Appeal Brief, all issues can be decided based upon the Examiner's mischaracterization of the teachings of the '081 reference. The Examiner continues to erroneously conclude that the frequency divider of the '081 reference only frequency divides a clock signal in the absence of a signal SLIP. The Examiner's conclusion is based upon a misreading of the '081 reference that appears to be caused by a continued reliance upon a partial quote taken out of context. Directly contradicting the Examiner's conclusion, the '081 reference expressly teaches that the clock signal is frequency divided in the presence of the signal SLIP and, as such, the rejections necessarily fail. The following discussion particularly addresses the improprieties of the rejections.

A. Reply Brief Issue No. 1: The Examiner Has Taken A Single Sentence From The '081 Reference Out Of Context And Inferred Functionality That Is Inconsistent With The Express Teachings Of The '081 Reference.

The Examiner's logic is premised upon the erroneous conclusion that (emphasis original) "the second clock circuitry 20 only performs such dividing in the absence of a signal SLIP supplied from the control circuit 10." The Examiner explains that the alleged correspondence is due to the (emphasis added) "pulses are only divided if the SLIP signal is not

present.” Examiner’s Answer, p. 11. As Appellant has repeatedly attempted to explain, the Examiner is taking part of a single sentence from the primary ‘081 reference and using it out of context. An inspection of the primary ‘081 reference reveals that the Examiner has inferred functionality that is inconsistent with the teachings of the ‘081 reference. The Examiner has continued to ignore the teachings of the ‘081 reference and also infers functionality inconsistent with the teachings of the ‘081 reference. The following explains how the ‘081 reference teaches that the divider circuit is configured to operate in two different dividing modes and that at least one of these dividing modes is always active.

The identified sentence explains that the counter operates as a divide by ‘m’ counter in the absence of the SLIP signal. It says nothing about how the counter operates in the presence of the SLIP signal. Despite this, the Examiner infers that pulses are not divided in the presence of the SLIP signal. This inference is wrong and directly contradicted by the teachings of the ‘081 reference. The ‘081 reference unequivocally explains that the counter divides by ‘m-1’ or ‘m+1’ in the presence of the SLIP signal. See ‘081 reference, Col. 3:29-33 (“the control circuit 10 supplies the SLIP signal to the divider 20 to cause the divider to slip by one pulse of the serial clock on the line 26; i.e. to divide by m-1 or m+1 for one division cycle.”) Thus, the Examiner’s assertion that pulses are only divided in the absence of the slip signal is clearly erroneous and the rejection should be reversed.

Moreover, if the ‘081 reference were modified to function in the manner suggested by the Examiner it would cease to be operable. During normal operation, the dividing circuit 20 of the ‘081 reference enables the parallel latch 18 every ‘m’ cycles. In this manner, the combination of circuit elements of the ‘081 reference provides a serial-to-parallel conversion of serial data 24. If dividing circuit 20 operated as the Examiner is asserting and did not divide the serial clock 26 by ‘m’, then this functionality would be disrupted. Thus, the illogic of the Examiner’s conclusions is further evidenced by the functionality of the overall circuit.

Appellant submits that the Examiner appears to have improperly focused upon the end result of the reference, while failing to address the different manners in which Appellant and the ‘081 reference achieve such a result. An embodiment of Appellant’s claimed invention delays the clocking of a parallel output portion of a shift register by holding an output clock for one high frequency clock cycle (*e.g.*, “preventing one of the first clock pulses from reaching the

second clock circuitry”), thereby synchronizing a counter (*e.g.*, a divider) to the serial bitstream using low frequency driving signals. As such, Appellant’s claimed invention does not require the second clock circuitry to include logic capable of multiple division modes. In contrast, the divider 20 of the ‘081 reference does require logic to implement different modes for different divisions of the serial clock (*e.g.*, for dividing by m or for dividing by $m+1/m-1$).

Moreover, a § 102(b) rejection is only proper if each element is expressly or inherently found in a single prior art reference. M.P.E.P. § 2131 citing to *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987). To the extent that the Examiner is hypothesizing about particular gating logic that might be present in the divider 20 of the ‘081 reference, such hypothetical gating logic is not explicitly taught by the ‘081 reference nor has the Examiner met the burden necessary to establish inherency. Accordingly, there is not sufficient evidence to support the rejection under § 102(b) (and no assertion has been made that the modification under § 103(a) has any pertinence to the above failing.)

In view of the above, the § 102(b) and § 103(a) rejections of claims 1-15 must be reversed.

B. Reply Brief Issue No. 2: The Examiner Fails To Provide A Valid Reason For The Proposed Combination Of References.

The Examiner continues to fail to provide a valid reason for the proposed combination of the asserted references. “A patent composed of several elements is not proved obvious merely by demonstrating that each element was, independently, known in the prior art.” *See, e.g., KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418-419 (2007) (“A patent composed of several elements is not proved obvious merely by demonstrating that each element was, independently, known in the prior art.”). In this instance, the Examiner asserts that it would be obvious to the skilled artisan that the device of the ‘081 reference could be applied as a frame synchronization device in a SONET or Gigabit Ethernet application because “such applications require frame synchronization and are well known in the art.” *See* page 7 of the Office Action dated August 22, 2008. As such, the Examiner merely asserts that such aspects are well known, without providing any reason why the skilled artisan would modify

the '081 reference. The recent Supreme Court decision supports the long-standing law that the mere existence of elements in the prior art is not sufficient for a § 103 rejection:

Although common sense directs one to look with care at a patent application that claims as innovation the combination of two known devices according to their established functions, it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. This is so because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418-419 (2007).

Thus, it is not sufficient to simply assert that such aspects are well-known. The Examiner must also provide a reason why the skilled artisan would modify the '081 reference in order to maintain the § 103 rejection.

In the Examiner's Answer on page 11, the Examiner continues to assert that the skilled artisan would combine aspects of the cited references simply because they are well-known. For example, the Examiner states that the '081 reference's frame finding circuitry could be advantageously utilized in an optical receiver and the combination of the two references would produce only routine and predictable results. The Examiner's assertion stops short of providing a reason why the skilled artisan would combine the cited references and instead simply concludes that the teaching of the '081 reference could be advantageously utilized in an optical receiver while failing to identify any alleged advantage for such a combination. Section 103(a) and relevant law recognizes that most inventions are combinations of known elements, and therefore requires significantly more than vague allegations and conclusory statements.

As a cautionary note, Appellant submits that any new or supplementary explanation provided at this late stage of prosecution must afford Appellant an opportunity to assess or respond to the sufficiency thereof. (*See, e.g.*, 37 C.F.R. § 41.50 "A new ground of rejection pursuant to this paragraph shall not be considered final for judicial review.")

Thus, it is clear that the Examiner's conclusions and vague assertions of combinability are not sufficient to sustain a 103(a) rejection.

In view of the above, the § 103(a) rejection of claim 15 is improper and must be reversed.

IV. Conclusion

In view of the above, and the underlying Appeal Brief, Appellant submits that the rejections of claims 1-15 are improper and therefore requests reversal of the rejections as applied to the appealed claims and allowance of the entire application.

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